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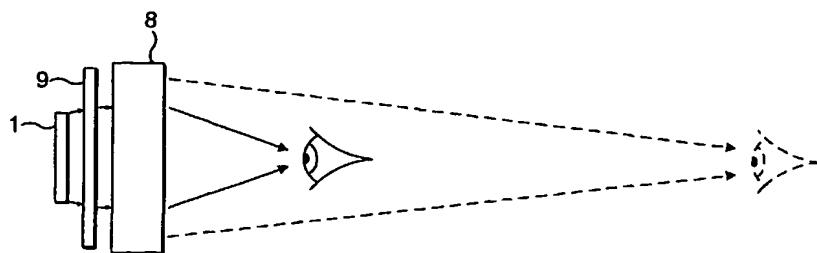
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(54) Title: DUAL MODE OPTICAL MAGNIFICATION SYSTEM



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(57) Abstract: A dual-mode image-forming system, for example for a camcorder or digital still camera, comprises an object (1), such as a display, a multi-element magnifying optical path (8) and focal length varying means for addition, adjustment or removal of one or more elements (9) in the optical path in order to vary the distance between "near-to-eye" and "arm's-length" modes of use, in order to vary the distance between a viewer's eye and the system, at which distance the magnified object can be viewed.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G02B27/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category ^a	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02 43041 A (DISPLAYTECH INC) 30 May 2002 (2002-05-30) abstract page 11, line 1 - line 11; figures 12,13 ---	1,2, 7-10,13
X	US 5 818 634 A (JACHIMOWICZ KAREN E ET AL) 6 October 1998 (1998-10-06) column 5, line 9 -column 6, line 10; figures 3,4 column 6, line 60 -column 7, line 51; figures 7,8 ---	1-3,7
X	EP 0 770 896 A (MOTOROLA INC) 2 May 1997 (1997-05-02) column 5, line 35 -column 10, line 4; figures 1-3 ---	1,2,7 -/-

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Date of the actual completion of the international search	Date of mailing of the International search report
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PCT/GB 03/04971

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 539 554 A (LEBBY MICHAEL S ET AL) 23 July 1996 (1996-07-23) column 5, line 66 -column 9, line 37; figures 4,5 -----	1-3,9, 10,13
X	WO 00 07066 A (POPOVICH MILAN M ;DIGILENS INC (US)) 10 February 2000 (2000-02-10) page 1, line 12 -page 2, line 24; figures 18,19 page 24, line 38 -page 25, line 26; figure 23C -----	1,4,6-13
A	WO 02 03122 A (COATES NICHOLAS RICHARD ;SEOS DISPLAYS LTD (GB); TOFIELD STANLEY J) 10 January 2002 (2002-01-10) the whole document -----	1,7,8

INTERNATIONAL SEARCH REPORT

Int'l. Application No

PCT/GB 03/04971

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0243041	A	30-05-2002	AU EP WO US	2567102 A 1346337 A1 0243041 A1 2002113912 A1		03-06-2002 24-09-2003 30-05-2002 22-08-2002
US 5818634	A	06-10-1998		NONE		
EP 0770896	A	02-05-1997	US DE DE EP JP	5633762 A 69613449 D1 69613449 T2 0770896 A1 9139901 A		27-05-1997 26-07-2001 08-11-2001 02-05-1997 27-05-1997
US 5539554	A	23-07-1996	JP TW	8297281 A 417036 B		12-11-1996 01-01-2001
WO 0007066	A	10-02-2000	AU WO US	5460899 A 0007066 A1 6661495 B1		21-02-2000 10-02-2000 09-12-2003
WO 0203122	A	10-01-2002	AU EP WO GB US	6769401 A 1299762 A1 0203122 A1 2379516 A , B 2004014504 A1		14-01-2002 09-04-2003 10-01-2002 12-03-2003 22-01-2004